

Dirk Jacobus Albertus van Zyl

CURRICULUM VITA

EDUCATION:

Executive Master of Business Administration, 1998, University of Colorado
Ph.D., 1979, Purdue University
M.S., Civil Engineering, 1976, Purdue University
B.Sc. (Honors), Civil Engineering, 1974, University of Pretoria, South Africa
B.Sc., Civil Engineering, 1972, University of Pretoria, South Africa

EXPERIENCE:

January 2010 to Present: **Professor and Chair of Mining and the Environment, Norman B. Keevil Institute of Mining Engineering, University of British Columbia, Vancouver, BC.**

January 2008 to December 2010: **Professor of Mine Life Cycle Management, Norman B. Keevil Institute of Mining Engineering, University of British Columbia, Vancouver, BC.**

September 1999 to present: **Professor of Mining Engineering and Director of the Mining Life-Cycle Center, Mackay School of Mines (changed to Mackay School of Earth Sciences and Engineering on January 1, 2004), University of Nevada, Reno**

April 1999 to present: **Geotechnical and Environmental Mining Consultant Reno, Nevada and Vancouver, BC**

September 2001 to August 2008: **Chairman of Mining Engineering, Mackay School of Earth Sciences and Engineering, College of Science, University of Nevada, Reno**

1998 – 1999	TRC Companies Inc. <i>Vice President Mining Industry</i>	Denver, Colorado
1992 - 1998	Golder Associates Inc. <i>Principal, Vice President Mining</i>	Denver, Colorado
1990 - 1991	EIC, Corporation <i>President and Principal Engineer</i>	Denver, Colorado
1988 - 1990	Welsh Engineering, Inc. <i>Vice President (also member Board of Directors)</i>	Denver, Colorado

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1987 - 1988	CH2M HILL <i>Geotechnical Engineer</i>	Denver, Colorado
1984 - 1987	Colorado State University <i>Associate Professor, Civil Engineering Department, Geotechnical Engineering Program</i>	Fort Collins, Colorado
1982 - 1984	University of Arizona <i>Assistant Professor, Department of Civil Engineering and Engineering Mechanics</i>	Tucson, Arizona
1979 - 1982	Steffen Robertson & Kirsten, <i>Senior Geotechnical Engineer, Project Manager, and Office Manager</i>	Johannesburg, South Africa, Denver, Colorado and Tucson, Arizona
1975 - 1979	Purdue University	West Lafayette, Indiana
1974 - 1975	Steffen Robertson and Kirsten <i>Geotechnical Engineer</i>	Johannesburg, South Africa
1973 - 1974	National Institute for Transportation and Road Research, Council for Scientific and Industrial Research <i>Assistant Research Officer</i>	Pretoria, South Africa

PROFESSIONAL AFFILIATIONS:

Registered Professional Civil Engineer - California, Indiana, New Mexico

Member, American Society of Civil Engineers

Member, Society of Mining, Metallurgy and Exploration Inc.

AWARDS AND HONORS

J.E. Jennings Award from South African Institute of Civil Engineers, 1981, Best Geotechnical Paper Published in the World by South African Authors for "The Piezometric Probe - A Useful Investigation Tool", In Proceedings of 10th Int. Conf. on Soil Mechanics and Foundation Engineering, Stockholm, Sweden.

Robert Peele Memorial Award, Society of Mining Engineers of the American Institute of Mining Metallurgical and Petroleum Engineers, 1986, best paper by young

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member "Construction Investigation of a Clay Heap Leach Pad" In Gold and Silver Heap and Dump Leaching Practice.

Society for Mining Metallurgy and Exploration Inc., 1992, Mining and Exploration Division, Distinguished Service Award

Society for Mining Metallurgy and Exploration Inc., 1998, President's Citation:
For continuous and consistent support of the Society's technology transfer and education through the creation and presentation of timely and industry relevant short courses, and the writing of applied engineering publications.

Society for Mining Metallurgy and Exploration Inc., 2003, Distinguished Member Award

Bureau of Land Management, 2005, Sustainable Development Award, Citation:
The award recognizes Dr. van Zyl's contributions over the last five years to a better understanding of mining and its contributions to sustainable development.

Adrian Smith International Environmental Mining Award, 2006.

PUBLICATIONS:

TECHNICAL PAPERS:

Van Zyl, D. (2011) Questa rock-pile weathering study: geotechnical characterization, Tailings and Mine Waste 2011, Norman B. Keevil Institute of Mining Engineering, UBC, pp 439 – 453.

Fredlund, M., Thode, R. and van Zyl, D. (2011) Slope stability model of the Questa rock pile – phase 1, Tailings and Mine Waste 2011, Norman B. Keevil Institute of Mining Engineering, UBC, pp 467 – 478.

Priestley, D., Fredlund, M. and Van Zyl, D. (2011) Modeling consolidation of tailings impoundments in one and two dimensions, Tailings and Mine Waste 2011, Norman B. Keevil Institute of Mining Engineering, UBC, pp 267 – 278.

Znidarcic, D., Miller, R., Van Zyl, D., Fredlund, M. and Wells, S. (2011) Consolidation testing of oil sand fine tailings, Tailings and Mine Waste 2011, Norman B. Keevil Institute of Mining Engineering, UBC, pp 251 – 257.

Caldwell, J. and Van Zyl, D. Thirty years of tailings history from tailings and mine waste, Tailings and Mine Waste 2011, Norman B. Keevil Institute of Mining Engineering, UBC, pp 79 – 91.

- Van Zyl, D. and Caldwell, J. (2011) Brief history of the conference series, Tailings and Mine Waste 2011, Norman B. Keevil Institute of Mining Engineering, UBC, pp 1 – 4.
- Mullard, Z. and Van Zyl, D. (2011) Enhancing access to information: social media applications and the mining industry, Proc. Social Responsibility in Mining, Santiago, Chile, Gecamin, 9 pp.
- Zhou, J.W., Zhou, A.G., Van Zyl, D., Tang, Z.H. and Bu, J.W. (2011) Mine closure in China – problems, strategies and forecasts, In: Mine Closure 2011, Vol. 2, Fourie, A, Tibbett, M and Beersing, A (Eds.), Australian Centre for Geomechanics, pp 501-509.
- Crossley, C., Russell, B., Van Zyl, D, and McKenna, G. (2011) Developing an operation, maintenance and surveillance manual for post-closure management, In: Mine Closure 2011, Vol. 2, Fourie, A, Tibbett, M and Beersing, A (Eds.), Australian Centre for Geomechanics, pp 219 -228.
- Shandro, J.A., Ostry, A, Scoble, M. and Van Zyl, D. (2011) Reaching economic and social prosperity – a need to collaborate with communities through commodity cycles to post-closure, In: Mine Closure 2011, Vol. 2, Fourie, A, Tibbett, M and Beersing, A (Eds.), Australian Centre for Geomechanics, pp. 167 – 176.
- Mullard, Z. and Van Zyl, D. (2011) The risks, challenges and benefits of using social media in the mining industry, Fifth Conference on Sustainable Development in the Minerals Industry, Institute of Mining Engineering I, RWTH Aachen University, June, pp 249 – 262.
- Garcia-Vasquez, M. and Van Zyl, D. (2011) The role so employee capacity in reducing company-community conflicts in Peru, Fifth Conference on Sustainable Development in the Minerals Industry, Institute of Mining Engineering I, RWTH Aachen University, June, pp 407 – 414.
- Sousa, R., Veiga, M., Van Zyl, D., Telmer, K., Spiegel, S. and Selder, J. (2011) Policies and regulations for Brazil's artisanal gold mining sector: analysis and recommendations, Journal of Cleaner Production, Vol. 19, pp 742-750.
- Priestley, D, Fredlund, M. and Van Zyl, D. (2010) Benchmarking multi-dimensional large strain consolidation analyses, Uranium 2010 Proceedings, Saskatoon, CIM, pp 271-288.
- Van Zyl, D. (2009) Life cycle assessment and tailings management trade-off studies – an approach to implementation, Sustainable Development Indicators in the Minerals Industry Conference, Gold Coast, QLD, AusIMM, 6 pp.

- Galla, V., Van Zyl, D. and Morrow, S. (2009) Significance of measured and modeled unsaturated flow results in heap leach materials using large diameter column tests, SME Annual Meeting, Preprint, 13 pp.
- Van Zyl, D. (2008), Life Cycle Assessment and Tailings Management Trade-Off Studies – Concepts, Tailings and Mine Waste 2008, Taylor and Francis Group, London, pp 355-358.
- Van Zyl, D. (2008), The Mine Life Cycle System and Mine Waste Management, International Conference on Mining and Industrial Waste, South African Inst of Civil Engineers, 13 pp.
- Van Zyl, D. (2008) Integrated Heap Leach Design – Incorporating Unsaturated Material Considerations, In: Rock Dumps 2008, Fourie, A. (Ed.), Australian Centre for Geomechanics, Perth, pp 153 – 166.
- Galla, V., Van Zyl, D. and Morrow, S. (2008) Evaluating Unsaturated Flow of Heap Leach Materials in Large Columns, In: Rock Dumps 2008, Fourie, A. (Ed.), Australian Centre for Geomechanics, Perth, pp 193 – 206.
- Webb, G., Tyler, S., Collord, J., Van Zyl, D., Halihan, T., Turrentine, J. and Fenstemaker, T. (2008) Field-scale analysis of flow mechanisms in highly heterogeneous mining media. Vadose Zone Journal. 7: 899-908.
- Van Zyl, D.J.A., Scoble, M. and Wilson, G.W. (2007) Mine Life Cycle Systems Models and Integrated Mine Closure for Sustainability, In Mine Closure 2007, Fourie, A., Tibbett, M. and Wiertz, J. (Eds.), Australian Centre for Geomechanics, Perth, pp 217 – 223.
- Van Zyl, D., Lohry, J. and Reid, R. (2007) Evaluation of Resource Management Plans in Nevada Using Seven Questions to Sustainability, In: Proceedings of the 3rd International Conference on Sustainable Development Indicators in the Mineral Industries, Z. Agioutantis (ed), Milos Conference Center, pp 403-410.
- Basu, A. and Van Zyl, Dirk J.A. (2006) Industrial Ecological Framework for Achieving Cleaner Production in the Mining and Minerals Industry, Special Issue of Journal of Cleaner Production, Elsevier, Vol. 14, Issues 3-4, pp 299-304, June.
- Oliveira-Filho, W. and Van Zyl, Dirk (2006) Modeling Discharge of Interstitial Water from Tailings Following Deposition – Part 1: Phenomenology and Model description. Brazilian Journal on Soil & Rocks, Vol. 29, No. 2, August.

- Oliveira-Filho, W. and Van Zyl, Dirk (2006) Modeling Discharge of Interstitial Water from Tailings Following Deposition – Part 2: Application. Brazilian Journal on Soil & Rocks, Vol. 29, No. 2, August.
- Van Zyl, Dirk J.A., Parsons, Stephen, McLemore, Virginia, Hornberger, Roger J. (2006) Acid drainage technology initiative: then years of mining industry, government agencies and academia collaboration in the metal and coal mining sectors in the USA, Proc. of the 7th International Conference on Acid Rock Drainage, St. Louis, MO, March 27-30.
- Milczarek, Michael A., Van Zyl, Dirk, Peng, Sheng, Rice, Robert C. (2006) Saturated and unsaturated hydraulic properties characterization at mine facilities: are we doing it right?, Proc. of the 7th International Conference on Acid Rock Drainage, St. Louis, MO, March 27-30.
- Van Zyl, Dirk J.A. (2005) Contributions of mining projects to sustainable development, Proceedings of 20th World Mining Congress, November 7 – 11, Teheran, Iran, 10 pp. (Invited keynote paper, written paper submitted but did not attend the meeting because of other travel commitments).
- Van Zyl, Dirk (2005) Sustainable Development and Mining Communities, In: Mining in New Mexico: The Environment, Water, Economics, and Sustainable Development, Price, G.L., Bland, D., McLemore, V.T. and Barker, J.M. (Eds.), New Mexico Bureau of Geology and Mineral Resources, pp 133- 136.
- Van Zyl, Dirk J.A. (2004) Towards Improved Environmental Indicators for Mining Using Life Cycle Thinking, In Life Cycle Assessment of Metals: Issues and Research Directions, Dubreuil, A. (Ed.), SETAC Press, pp 117-122.
- Grayson, R.L., Dickinson, T.L., Anderson, C.G. and Van Zyl, D.J.A. (2004) Materials Flows Accounting of Natural Resources, Products and Residuals, SME Annual Meeting, Denver, CO.
- Van Zyl, D. (2003) Mining Employment, Economic Contributions and Their Impacts in the USA, In: Proceedings of International Conference on Sustainable Development Indicators in the Mineral Industries, Z. Agioutantis (ed), Milos Conference Center, pp 115 – 122.
- Shields, D.J., Wagner, L.A., Van Zyl, D. (2003) Indicators of Mineral Systems Contributions to Sustainability in the USA, In: Proceedings of International Conference on Sustainable Development Indicators in the Mineral Industries, Z. Agioutantis (ed), Milos Conference Center, pp 35 – 41.

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- Hodge, R.A. and D.van Zyl (2002) Towards Change – The Work and Results of MMSD – North America, International Institute for Sustainable Development, Winnipeg.
- Van Zyl, Dirk J.A. (2001) Long-Term Liabilities, Financial Assurance and Potential Opportunities, Proc. Southern Africa Conference on Sustainable Development in Mining, Pretoria, ICME, June 11pp.
- Van Zyl, Dirk J.A. and Glenn M. Eurick (2000) The Management of Mercury in the Modern Gold Mining Industry, EPA Conference on Mercury and Mining, San Francisco, November.
- Van Zyl, Dirk J.A. and Straskraba, V. (1999) Mine Closure Considerations in Arid and Semi-Arid Areas, International Mine Water Association Conference, Seville, Spain.
- Van Zyl, Dirk J.A. (1999) Technology, Management, Policy and Philosophy of Environmental Protection in the Mining Industry, Proc. of International Mining and Environment Congress, Colegio de Ingenieros del Peru, pp 771-784.
- McGregor, Jock and Van Zyl, D. (1999) Parallels in the Development of Copper and Gold Heap Leaching Technology, In: Copper Leaching, Solvent Extraction, and Electrowinning Technology, Gerald V. Jergensen II (Ed.), SME, pp 155-166.
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- Van Zyl, D. (1997) Environmental Uncertainties in Mine Development, In Proceedings of Brazilian Institute of Mining (IBRAM), Belo Horizonte, MG, Brazil, May
- Van Zyl, D., Voss, C., Bailey, B. and Casey, A. (1997) Including Environmental Uncertainty in Decision-Making Throughout the Mine Life Cycle, In: Proceedings of the 6th Annual Mineral Economics and Management Society Meeting, Boulder (Ed.), pp 244 - 272.
- Van Zyl, D., Costa, R. and Miller, S. (1996) Controlling Effluent from Heap Leach Facilities, In Proceedings of 9th International Gold Symposium, Rio de Janeiro, August.

- Van Zyl, D. I. Miller, V. Milligan, W.J. Tilson (1996) Probabilistic Risk Assessment for Tailings Impoundment Founded on Paleokarst, In: Uncertainty in the Geologic Environment: From Theory to Practice, C. D. Shackelford, P.P. Nelson and M.J.S. Roth (eds.), Geotechnical Special Publication No. 58, ASCE, Vol. 1, pp 563 – 585.
- Miller, S. and Van Zyl, D. (1995) Summitville Site Water Quality Characterization and Modeling, In: Proceedings: Summitville Forum '95, Posey, H., Pendelton, J. and Van Zyl, D. (eds.), Special Publication 38, Colorado Geological Survey, pp 75 - 86.
- Morrey, D., Van Zyl, D., and Gadsby, J. (1995) Principal Components of Economic Mine Closure, In: Proceedings Mining and the Environment in Zimbabwe, Zimbabwe Section of the Institution of Mining And Metallurgy, May 15-16, 1995, Harare, Zimbabwe.
- Van Zyl, D. and Morrey, D. (1994) Including Uncertainty in Mine Closure, In: Proceedings Fifth Western Regional Conference on Precious Metals, Coal and the Environment, Black Hill Section, SME, Lead, South Dakota.
- Van Zyl, D. and Bronson, B. (1994) Geotechnical and Environmental Aspects of Heap Leach Design, Operation and Closure, In: Proceedings Recent Trends in Heap Leaching, The Australasian Institute of Mining and Metallurgy, Dr. S. Swaminathan (ed), M. Gowan, Presenter, Victoria, Australia.
- Williams, D., Van Zyl, D. and Gowan, M. (1994) Waste Management, Tailings Dams, In: Proceedings Third International Conference on Environmental Issues and Waste Management in Energy and Mineral Production and Workshop 4: Environmental Management and Waste Disposal with Emphasis on the Coal Industry.
- Van Zyl, D. (1992) Environmental Impacts and Lessons Learned from Heap Leach Failures, Colorado Section of ASCE Geotechnical - Environmental Seminar Foundations of Success: Lessons Learned from Failures, Denver, Colorado.
- Van Zyl, D. and Bamberg, Samuel (1992) Qualitative Environmental Risk Assessment for Mine Development, Risk Assessment/Management Issues in the Environmental Planning of Mines, Dirk Van Zyl, Marshall Kovall, and Ta M. Li (eds), Society for Mining Metallurgy and Exploration Inc., Chapter 3, pp. 19-31.
- Van Zyl, D., M. Henderson and B. Cobb (1990) Economic Aspects of Pad Construction Costs on Heap Leach Projects, International Journal of Mining and Geological Engineers 1990, 8, pp. 275-286.

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- Uhle, R.J. and D. Van Zyl (1990) Shear Strength and Deformation Parameters of Rockfill Related to Particle Size, Proc. of 31st U.S. Rock Mech. Symp., A.A. Balkema Publishers.
- Van Zyl, D. (1990) Scale Effects in Estimating Shear Strength Parameters for Waste Rock Dumps, International Workshop on Scale Effects in Site Characterization, in conjunction with 31st U.S. Symp. on Rock Mech., Colorado School of Mines, 7 pp.
- Van Zyl, D. (1990) Environmental Issues and Mine Development, Oregon Mining Issues Forum, Bend, OR, Sept. 8, 10 pp.
- Van Zyl, D. (1990) Reliability-Based Design of Heap Leach Pads and Ponds, Proc. 4th Western Regional Conf. on Prec. Met. and the Env., SME, Lead, SD.
- Van Zyl, D. (1990) A Survey of Geomembrane Liner Systems in the U.S. Precious Metal Industry, AMC Mining Convention '90, New Orleans, Sept. 23-26.
- Miranda, A.N. and Van Zyl, D. (1989) Finite Element Method Approach for Collapsing Soils. Proc. of XIIth ICSMFE, Rio de Janeiro, A.A. Balkema, Publishers.
- Cobb, William E., Bluck, W.V., and Van Zyl, Dirk, (1988) Application of Risk Assessment to Mine Waste Sites, Paper presented at the SME Annual Meeting, Phoenix, AZ, 11 pp.
- Chen, H.W. and Van Zyl, Dirk (1988) Shear Strength and Volume Change Behavior of Copper tailings under Saturated Conditions, Hydraulic Fill Structures, D.J.A. van Zyl and S.G. Vick (Eds.) ASCE, pp. 430-451.
- Van Zyl, Dirk (1988) Reliability Engineering and Risk Assessment in Waste Disposal Design, In: Proc. of Symp. on Reliability-Based Design in Civil Engineering, P.L. Bourdeau (Ed), EPFL, Lausanne, Switzerland, Vol. 2, pp. 13-35.
- Van Zyl, Dirk and Robertson, A. MacG., (1987) A Probabilistic Approach to the Long-term Stability of Uranium Tailings Impoundments, Int. Journal of Surface Mining, A.A. Balkema Publishers, Vol. 1, pp. 83-90.
- Van Zyl, Dirk, Nelson, J.D. and Wardwell, R.E., (1987) Use of Dilatometer and Piezocone Testing in Design of Tailings Reclamation Plans, Trans. of Society of Mining Engineers of AIME, Vol. 280, pp. 1882-1886.

- Van Zyl, Dirk (1987) Seepage and Drainage Analysis of Tailings Impoundments - Is it Really That Simple? Proc. Int. Conf. on Mining and Industrial Waste Management, J.A. Wates and D. Brink (Eds.), South African Inst. of Civil Engineers, pp. 211-222.
- Van Zyl, Dirk (1987) Pollution and the Environment, Proc.Int. Conf. on Mining and Industrial Waste Management, J.A. Wates and D. Brink (Eds.), South African Inst. of Civil Engineering, pp. 225-232.
- Van Zyl, Dirk (1987) Health Risk Assessment and Geotechnical Perspective, Geotechnical Practice for Waste Disposal, Richard D. Woods (Ed.), ASCE, pp. 812-831.
- Strachan, Clint and Van Zyl, Dirk (1987) Feasibility Assessment for Increasing Heap Thicknesses at the Alligator Ridge Mine. Geotechnical Aspects of Heap Leach Design, Dirk van Zyl (Ed.), Society of Mining Engineers, pp. 65-76.
- Van Zyl, D. (1986) An Approach to Incorporate Rock Fabric Information in Blast Fragmentation Investigations, Proc. of 1986 Mini-Symposium on Research, Conf. Society of Expl. Eng., Atlanta, GA, 11 pp.
- Miller, L.L., R.E. Wardwell and D. Van Zyl (1986) Time Rate of Settlement of Saturated Waste Materials Subjected to Drainage, Proc. of the 8th Annual Symp. on Geotechnical and Geohydrological Aspects of Waste Management, A.A. Balkema Publishers, pp. 359-563
- McIntosh, B.J. and Van Zyl, D. (1986) A Simplified Probabilistic Approach to Cover Thickness Design, Proc. of the 8th Annual Symp. on Geotechnical and Geohydrological Aspects of Waste Management, A.A. Balkema Publishers, pp. 351-358.
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- Wardwell, R.E., Van Zyl, D.J.A. and Wong, T. (1985) Field Behavior of Tailings Subjected to Reclamation Cover, Proc. of XIth ICSMFE, San Francisco, CA, A.A. Balkema Publishers, Vol. 2, pp. 1149-1152.
- Van Zyl, Dirk (1985) Predicting Grain Size Distribution of Blast Material Based on Rock Fabric Information (Abstract only). Research and Engineering Applications in Rock Masses, E. Ashworth (Ed.), A.A. Balkema Publishers, Vol. 2, pp. 1159-1160.
- McIntosh, B.J. and Van Zyl, Dirk (1985) Probabilistic Approach to Unsaturated Seepage Analysis, Proc. of 7th Annual Symp. on Management of Uranium Mill Tailings,

- Low-Level Waste, and Hazardous Waste, Colorado State University, Fort Collins, Colorado, pp. 441-450.
- Van Zyl, Dirk J.A. (1985) Identification of Underconsolidated Zones in Tailings with Piezocone, Updating Subsurface Sampling of Soils and Rocks and Their In-Situ Testing, S.K. Saxena (Ed.), Engineering Foundation, New York, pp. 269-278.
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- Caldwell, J.A., Ferguson, K., Schiffman, R.L. and Van Zyl, D.(1984) Application of Finite Strain Consolidation Theory for Engineering Design and Environmental Planning of Mine Tailings Impoundments, Sedimentation/Consolidation Models - Predictions and Validation, R.W. Yong and F.C. Townsend (Ed.), ASCE, pp. 581-606.
- Bartlett, C.L. and Van Zyl, D. (1984) Utilizing Numerical Analysis of Unsaturated Seepage to Design Tailings Management Strategy, Proc. of 6th Annual Symposium on Management of Uranium Tailings, Low-Level Waste, and Hazardous Waste, Colorado State University, Fort Collins, Colorado pp. 115-124.
- Van Zyl, Dirk (1984) Construction and Investigation of a Clay Heap Leach Pad, Heap and dump Leaching Practice, Gold and Silver Heap and Dump Leaching Practice, J.B. Hiskey (ed.), SME, pp. 59-68.
- Van Zyl, Dirk and Rossner, John C. (1983) Mine Tailings in Construction ASCE Convention, Philadelphia, Pennsylvania, Preprint 83-029, May, 12 pp.
- Van Zyl, Dirk J.A. and Harr, Milton E. (1983) A Probabilistic Approach to Seepage Erosion Under Confined Flow, Proc. of 4th Int. Conf. on Appl. of Stat. and Prob. in Soil and Struct. Eng., Florence, Italy, Pitagora Editrice, Vol. II, pp. 1531-1542.
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- Robertson, A. MacG., Fisher, J.W. and Van Zyl, Dirk (1982) Handling and Disposal of Dry Uranium Tailings, Proceedings of the 5th Symposium on Uranium Mill Tailings Management, Colorado State University, Fort Collins, Colorado, pp. 55-69.
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Van Zyl, D.J.A. and Jaaback, G. (1975) An Appraisal of Two Qualitative Field Trails Comparing Methods of Erosion Control on Earth Slopes, Proc. of the 6th Regional Conf. for Africa on Soil Mechanics and Foundation Engineering, Vol. 1, pp. 271-279.

Harmse, H.J. von M. and Van Zyl, D.J.A. (1975) The Chemical and Physical Preparation of Earthworks Slopes for the Establishment of Vegetation, Proc. of the 6th Regional Conf. for Africa on Soil Mechanics and Foundation Engineering, Vol. I, pp. 237-241.

Van Zyl, D.J.A. (1973) Soil Erosion by Water - A Physical Process (in Afrikaans), Proc. of the 5th Quinquennial Convention, South African Institute of Civil Engineers, Soil Mechanics and Foundation Engineering Div. Specialty Session: Engineering Aspects of Erosion, Johannesburg.

BOOK CHAPTERS:

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Van Zyl, D. (1992) Mine Closure, In: Mine Waste Management, Ian P.G. Hutchison and Richard Ellison (eds), Lewis Publishers, Ann Arbor, pp.

DISCUSSIONS:

Miranda, A.N. de and Van Zyl, D. (1988) Discussion on "Prediction of Collapse Settlement of a High Embankment", by J.P. Lourens and H. Czaplá, The Civil Engineer in South Africa, Vol. 30, No. 2, Feb. p. 75.

Van Zyl, D.J.A. (1983) Discussion on "Significance of the Probability of Failure in Slope Engineering", by H.A.D. Kirsten, The Civil Engineer in South Africa, SAICE, Vol. 25, No. 6, p. 319.

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